

Speculative Notes on the Kentish Glory

By PETER MARRAN*

If a prize were to be offered for Britain's most desirable moth, surely *Endromis versicolora*, the Kentish Glory, would be on the short list. There can be few other moths which are both rare and beautiful, reside exclusively in magnificent surroundings, are as conspicuous as any butterfly and in addition possess the melancholy glamour of a sharply declining population. I have a special affection for this moth, since I live near one of its best remaining localities, and its appearance in the spring marks the onset of greenery in the birches and the end of the sometimes grim Highland winter. The loss of the Kentish Glory would be an entomological tragedy comparable to that of the Large Blue, but, so far as I am aware, the cause of its rapid decline remains unknown or attributed to "climatic change" of an unspecified nature. However, I suggest that this decline may not be so very mysterious after all.

The distribution of the Kentish Glory in Britain is a very curious one. The three main areas in which it has been recorded are the south eastern counties, the west Midlands and the central and north-eastern Highlands of Scotland. The latter is separated from the two former areas by at least 450 kilometres, and this pattern of distribution has been attributed to a double colonisation (Ford, 1972). It is interesting that some other local birchwood moths such as the Scarce Prominent (*Odontosia carmelita*) and Silvery Arches (*Polia hepatica*) have a broadly similar south east England-Scottish Highlands distribution, although they also occur elsewhere. The Kentish Glory has declined markedly in England during the past century and it is now feared extinct, having vanished from all of its old haunts, one by one. This demise has sometimes been attributed to "climatic change" but unless specified further that is invariably just a synonym for "we don't know". Over-collecting may have been a factor in some areas, and P. B. M. Allan (1943) cites Barton Mills in Suffolk as an example. As a strong assembling species, it may have been particularly susceptible since dealers and collectors could attract a large part of the local population of males by putting out freshly emerged virgin females. South's statement on the well-known former colony at Tilgate Forest has an ominous ring: "It used to be so plentiful in Tilgate Forest, Sussex, that over a hundred males were brought to the net in one day by a bred female put down to allure them. This happened on April 5th, 1858, and compares curiously with a record of one male attracted to a female in Tilgate Forest, April 13th, 1869".

However, collectors notoriously return to 'localities' rather than break new ground, and collecting, even at its most unscrupulous, must have been more than a local influence. The principal factor in the decline of most (though certainly not all) well-documented species is habitat destruction (other

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factors may take part in the *coup de grace* of the last few colonies). Famous examples include the blue butterflies of chalk and limestone downs and the Swallowtail and Large Copper in the East Anglian fens. The Kentish Glory inhabits open birchwoods and, in Scotland at least, prefers the young scrubby bushes and small trees characteristic of the new regeneration which follows felling or the cessation of burning and grazing on open moors. One tends to dismiss such scrub birch as a common and widespread habitat compared with, say, chalk downs or fens, as indeed it once was. But is this still necessarily true? Over much of lowland England scrub birch became widespread as the result of the heavy felling of high forest, particularly during the two world wars. Since 1945 this economically near-worthless scrub has generally been cleared for land improvement, or planted up with conifers, with enhanced grant-aid schemes, and in parts of the country it has almost disappeared. Scrub birch is of course a serial stage in a natural succession leading ultimately to high forest of oak and other trees. Since scrub birch is therefore only a 'temporary' habitat whose extent is largely determined by economic factors, one might expect a dependant insect like the Kentish Glory to show similarly fluctuating fortunes. This appears in fact to have happened. Moses Harris (1775) regarded his 'Glory of Kent' as a great rarity. An apparent increase in the first half of the nineteenth century (following the widespread felling of oak forests during the Napoleonic wars?) was followed by a decline in the twentieth century as Forestry Commission land purchases and grants resulted in the replacement of much of the potential Kentish Glory habitat with conifer plantations. The apparent gains and declines in the fortunes of the Kentish Glory are probably real ones, since it is one of the most conspicuous of our moths and is readily attracted to light or virgin bait. This implies that the probability of its complete extinction in England (unless entomologists are going around with their eyes—or mouths—determinedly shut) is also, alas, a real one. More the pity then, that there appear to be so few birchwood nature reserves in England, and that the Wyre Forest National Nature Reserve was declared too late to save the Kentish Glory in what was possibly its last English locality.

In Scotland, the position is different, but equally curious. The Kentish Glory has not been seen at the famous locality of Rannoch for some years and, since there is still plenty of birch in that neighbourhood, one wonders whether this may be another site where there has been over-collecting. The main areas of the Kentish Glory are now the birch forest of Speyside and Deeside and even here it is distinctly local. It has declined at that other once-famous locality at Cleagellachie, Aviemore, since the mature birch wood there now is unsuitable (and partly, I suspect, because the bright lights of the adjacent Aviemore centre may have attracted most of the male moths). On the other hand, it has been found quite

recently in a number of places in the Dee valley between Braemar and Banchory. One such area is a heather-covered plain which was once burned regularly for grouse and sheep, but is now being colonised by young birch forest and scrub since muirburn ceased in the 1950s. Within this area the Kentish Glory is (in some years at least) quite a common moth. In May 1979 I left a Robinson trap overnight in an open field in the general area, and was embarrassed to find 37 male Kentish Glories sitting inside the next morning. The probable reason is that the area combines an abundance of the foodplant (*Betula pendula*—the moth is said to avoid *B. pubescens*) together with the open ground evidently needed by the males in their search for the relatively immobile females. They also seem to prefer twiggy bushes and small trees on which to lay their eggs, rather than the taller trees of mature woods. This combination of requirements is rarely found in the Highlands: because of over-grazing by the artificially large and free-ranging stocks of red deer, most Highland birchwoods consist of old or moribund trees with little or no regeneration. The type of habitat preferred by the Kentish Glory can therefore be found only in places where there are few deer or where they are excluded by fencing or adjacent plantations. I believe that this factor alone is sufficient to explain the localisation of the moth within its known range in the Scottish Highlands (its absence from western Scotland is probably due to climatic factors; the moth evidently favours only the drier, more continental parts of Britain). Invading birch scrub is of course a temporary stage between moorland and forest, but in natural forests it was probably self-maintaining in clearings and woodland edges. Unfortunately, with the present deer grazing levels (a fairly recent phenomenon) and the unparalleled economic pressures to 'improve' land, a degree of management is probably needed in order to maintain ideal 'Kentish Glory country' within the few places, such as nature reserves, where that is now possible.

I believe that the other factor resulting in the decline of the Kentish Glory lies in the behaviour of the moth itself. The moth is admirably adapted to the birchwood habitat: the eggs are laid in small clutches below the leaf bud or fork in the twig and change colour within two days from the freshly-laid canary-yellow to a deep purple-brown which *exactly* matches that of the bark. The handsome larvae are similarly camouflaged, particularly in their final three instars, so much so that they are extremely difficult to find in the wild (more so even than the eggs!). The pupa, like many Highland species, has a built-in insurance against poor springs by which a proportion have delayed emergence for two or more years. It is a pleasant moth to rear, and not difficult, whether sleeved out of doors or on potted birch sprigs. The freshly emerged moth is a beautiful object indeed. Its Achilles heel appears to me to be the immobility of the females, which

are, even more so than *pavonia*, torpid egg-laying machines. They are poor fliers, unlike the males which cover considerable distances, and appear to have only brief periods of inactivity before, during and after egg-laying. This behaviour implies a poor ability to colonise new areas, which may account for the localisation of Kentish Glory colonies. This has already been noted in some of the hairstreak butterflies, particularly *Strymonidia pruni*. This is a potentially serious disability in a moth of essentially ephemeral and often fragmentary habit; it implies that it would be slow to spread into areas which become apparently suitable, and is compatible with what we know of its distribution. It also implies that introduction into apparently suitable areas could be a sensible course of action to conserve the moth, should all else fail.

There seem to me to be at least two straightforward pieces of survey work which could be undertaken to gain a better idea of the past and present status of the Kentish Glory in Britain. The first would be a systematic search for it in Scotland, particularly in places such as the Moray Firth, the Findhorn valley and Easter Ross, parts of which are almost unexplored entomologically. The moth is probably under-recorded in the Highlands, though not, perhaps, by very much. The second would be to examine the forest history of a range of known former localities in England to see if there is some common factor, as I suspect there is, such as a change in forestry practice, which coincided with a decline in the recorded moth population. This might make a nice project for somebody. In the meantime, one can only speculate.

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References

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ADDITION TO THE CANNA LIST. — On June 12th a fine large pale specimen of *Acronycta leporina* was found sitting on the external woodwork of a house here west of the harbour. The moth trap is not being worked during the short summer nights of May, June and July, owing to the cost of keeping the diesel generator plant running later than 11.30 p.m., but my impression is that moths have been scarcer during the past two or three years, possibly owing to the considerable increase in the number of small birds here since the new plantations were made — from observations by bird watchers insect larvae seem to be their main food. I am glad to say that the number of corncrakes heard this spring showed some increase. — J. L. CAMPBELL, Isle of Canna, Hebrides.